

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : **59-039150**

(43)Date of publication of application : **03.03.1984**

(51)Int.Cl.

H04L 27/00

H04L 1/22

(21)Application number : **57-148947**

(71)Applicant : **FUJITSU LTD**

(22)Date of filing : **27.08.1982**

(72)Inventor : **OZAKI TAKAYUKI**

## (54) COMMUNICATION SYSTEM

(57)Abstract:

**PURPOSE:** To reduce system cost as one antenna system, by dividing an input signal into two and transmitting in parallel the result by a 4-PSK system, in a radio system of hexadecimal orthogonal amplitude modulation.

**CONSTITUTION:** A signal in 4-bit transmitted from buses 1, 2 of each channel in normal case is inputted to radio sets 11-1, 11-2 of the 16 QAM system and transmitted via an antenna 13. If a failure of line takes place because of differential fading or the like in any of common use channels, the input of the buses 1, 2 of the channel is transmitted by switching to radio sets 12-2, 12-1 of the 4-PSK system of a spare channel or the bus 2, e.g., of the buses 1, 2 is switched to the radio set 12-1 and the signal on the buses 1, 2 is transmitted in parallel in the radio set 11-1 of the 16 QAM system and the radio set 12-1 of the 4-PSK system. In case of line is failed, the signal is transmitted by the 4-PSK system immune from the C/N and waveform distortion, then the gain of the system is improved.

